

REMARKS

In responding to the Office Action, Applicants conducted a telephone interview with Examiner Nguyen on April 28, 2010. Applicants thank the Examiner for time generously granted for the interview. During this interview, the pending rejections and amendments were discussed. Applicants presented arguments for patentability and the Examiner indicated that amending the claim to include that the first oxidation catalyst is closely coupled to the engine outlet and is not part of an underfloor area of a motor vehicle, and a hydrocarbon adsorber is arranged upstream of the particulate filter in the underfloor area of the motor vehicle and the particulate filter is coated with a second oxidation catalyst should overcome the rejection under 35 U.S.C. § 103 in view of the cited references, however, the Examiner would need to do a new search and give further consideration to the amendments.

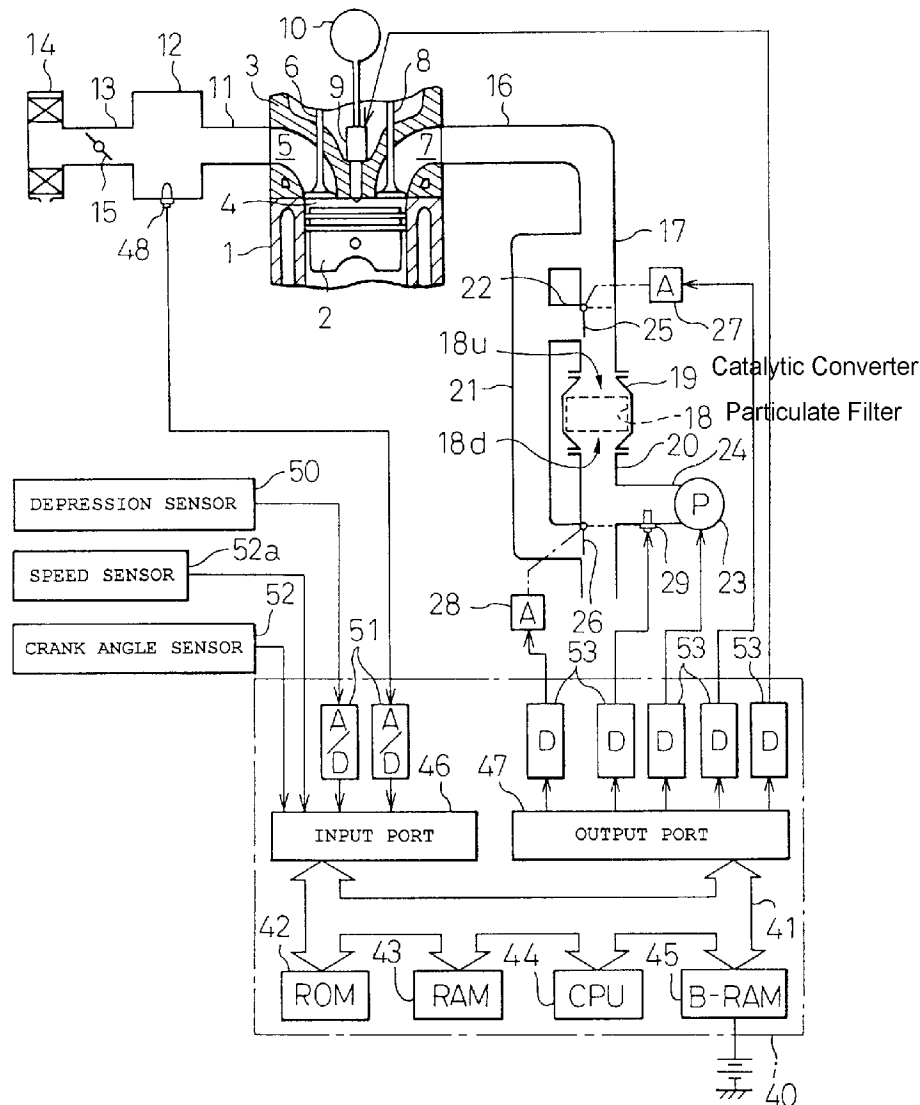
By this amendment, Applicants have amended claim 1, consistent with the interview, to include that the first oxidation catalyst is closely coupled to the engine outlet and is not part of an underfloor area of a motor vehicle and that the particulate filter is coated with a second oxidation catalyst, which is part of the underfloor area. Having the first oxidation catalyst (7) close to the engine, while the HC adsorber (4) and particulate filter (5) are part of the under floor catalyst (far away from the engine) allows the oxidation catalyst to be rapidly heated up to its light-off temperature, and the hydrocarbon adsorber being arranged far away from the engine in an area of low exhaust-gas temperatures eliminates premature desorption of the hydrocarbons. Support for this amendment to claim 1 can be found at paragraphs 26, 34-37 and Figure 1 of the published application US 2007/0119152. Therefore, the concept of having one oxidation catalyst closely coupled to the engine and the second oxidation catalyst away from the engine in an underfloor catalyst coated on the PF (particulate filter) and behind the HC adsorber and the benefits of this arrangement are not disclosed or made obvious in Hirota and Deeba. Claims 3 and 6 have been amended to make them consistent with claim 1 as amended. These amendments do not add new matter. Applicants respectfully request entry of this amendment and allowance of the pending claims.

I. Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 6,367,246 (Hirota) in view of U.S. Patent No. 6,912,847 (Deeba).

Applicants respectfully traverse this rejection.

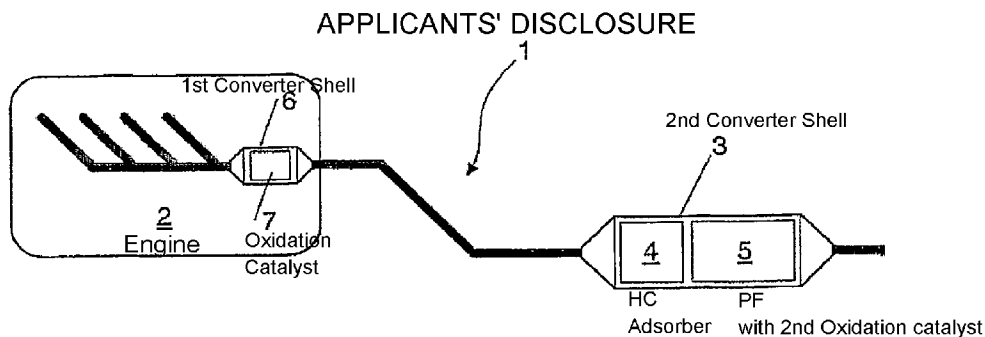
Hirota discloses a particulate filter (18) arranged in the exhaust passage of an engine, where only the inner wall surface of the downstream end open cells of the particulate filter is covered with a NO_x adsorbent, and the inner wall surface of the upstream end open cells is covered with a HC adsorbent. However, all Hirota disclosure is that his catalyst (19) is an underfloor catalyst as shown in Figure 1



Clearly Hirota teaches away from closely coupling the oxidation catalyst to the engine outlet, while the HC adsorber and particulate filter are part of the underfloor catalyst (far away from the engine), as currently claimed. Applicants' arrangement, among other things, allows the oxidation catalyst to be rapidly heated up to its light-off temperature, and the hydrocarbon

adsorber being arranged far away from the engine in an area of low exhaust-gas temperatures eliminates premature desorption of the hydrocarbons.

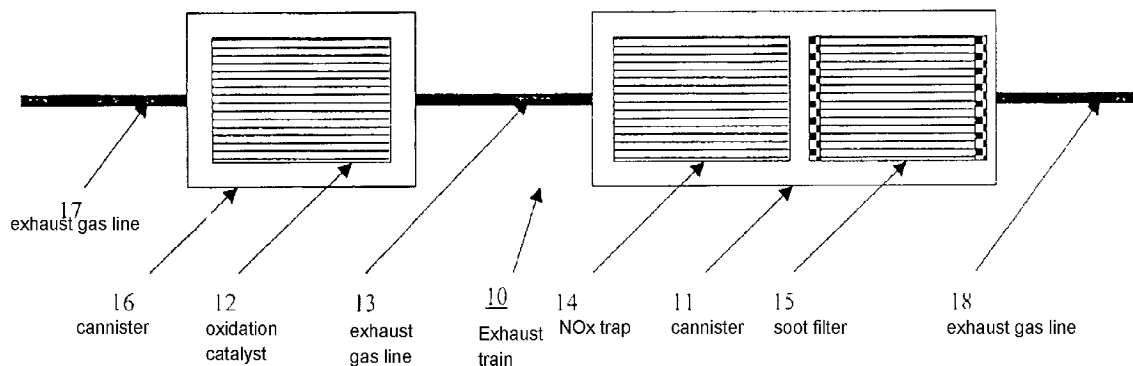
More particularly, Applicants' first oxidation catalyst 7 is closely coupled to the engine 2 so that it warms up quickly after cold start. The particulate filter (PF) 5 as recited in claim 1 is arranged in the underfloor area of the motor vehicle and is in the same converter housing 3 as the hydrocarbon adsorber (4) as shown in Figure 1 below:



Hirota simply does not make this arrangement and the benefits therefrom obvious.

Like Hirota, Deeba does not make the current claims obvious. Deeba teaches low temperature NO₂ trap compositions useful for adsorbing NO₂ from a gas stream at lower temperatures, and releasing the NO₂ at higher temperatures. Deeba teaches that his oxidation catalyst is far away from the engine block and one of ordinary skill in the art on reading Deeba would not consider Deeba's catalyst to be closely coupled to the engine as claimed. Figure 3 of Deeba, which the Examiner points to in the Office Action, is reproduced below.

Figure 3



As you can see from Figure 3 of Deeba, the oxidation catalyst is not coupled close to the

engine block. Further, Deebea does not appreciate the benefits of Applicants' arrangement of having the first oxidation catalyst closely coupled to the engine, which allows the oxidation catalyst to be rapidly heated up to its light-off temperature, and that the hydrocarbon adsorber being arranged far away from the engine in an area of low exhaust-gas temperatures eliminates premature desorption of the hydrocarbons. Further Deebea says nothing about having a second oxidation catalyst coated on the PF, as currently claimed.

Applicants respectfully submit that one of ordinary skill in the art would not combine the references in the way the Examiner does. Even if one of ordinary skill in the art was to combine the references one would still not obtain the present claims as the first oxidation catalyst would not be closely coupled to the engine as currently claimed. Accordingly, Applicants respectfully submit that the claims cannot be considered obvious over any of the cited references alone or in combination and request that the rejections under 35 U.S.C. §103(a) be reconsidered and withdrawn.

II. Conclusion

Reconsideration and allowance are respectfully solicited

No fee is believed to be due with respect to filing this amendment. If any additional fees are due, or an overpayment has been made, please charge, or credit, our Deposit Account No. 11-0171 for such sum.

If the Examiner has any questions regarding the present application, the Examiner is cordially invited to contact Applicants' attorney at the telephone number provided below.

Respectfully submitted,

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